Abstract of the Invention

Method and system for generating a multiple width (e.g., 16-bit width) pseudo-random number (PRN). Each of first and second 8-bit width PRNs is generated, using first and second LFSR configurations that incorporate first and second characteristic polynomials, at least one of which is irreducible. The first and second 8-bit PRNs are generated on a rising edge and on a falling edge, respectively, of a clock signal. The first and second 8-bit PRNs are combined by concatenation or by interleaving to form a 16-bit, or other multiple width, PRN.